

Mineral Industry Surveys

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MOLYBDENUM IN MAY 2020

Domestic production of molybdenum in concentrate in May 2020 was 11% more than the output of the previous month and 13% more than that of May 2019. Total production during the first 5 months of 2020 was 21% more than total production during the same period in 2019 (fig. 1, table 1).

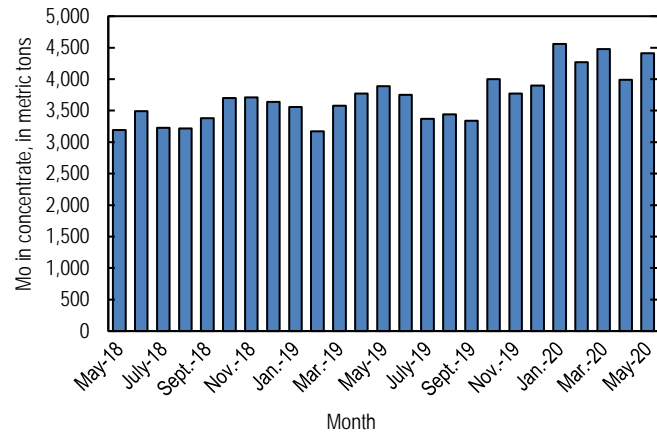


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from May 2018 through May 2020 (may include revisions to previously published data).

According to CRU Group (2020), the May 2020 monthly average price range for U.S. ferromolybdenum (FeMo) was \$9.200 to \$9.856 per pound of molybdenum content, compared with \$9.300 to \$9.800 per pound in April 2020. FeMo monthly averages in Europe ranged from \$20.663 to \$21.263 per kilogram (\$9.373 to \$9.645 per pound) of molybdenum content in May 2020 compared with \$20.578 to \$21.222 per kilogram (\$9.334 to \$9.626 per pound) in April 2020. U.S. molybdenum

oxide (MoO₃) prices ranged from \$8.500 to \$9.000 per pound of molybdenum content in May 2020 compared with \$9.450 to \$9.950 per pound of molybdenum content in April 2020 (fig. 2).

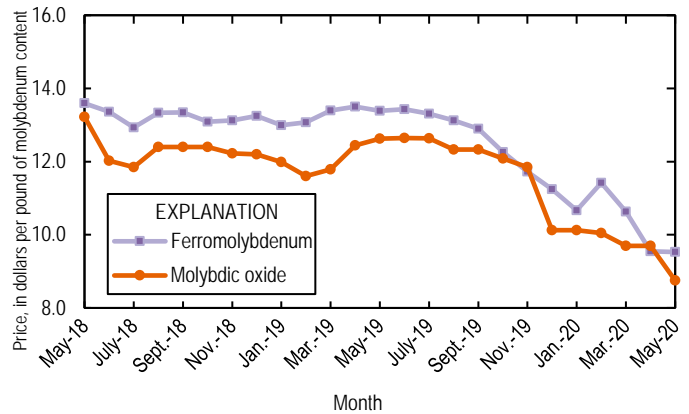


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from May 2018 through May 2020. Source: CRU Group.

Reference Cited

CRU Group, 2020, Molybdenum prices: London, United Kingdom, CRU Group, May 1. (Accessed July 14, 2020, via <http://www.crugroup.com/>.)

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TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE
STATISTICS^{1,2}

(Metric tons, contained molybdenum)

Period	Production	Shipments ^{3,4}
2019:		
January	3,560	3,560
February	3,170	3,140
March	3,580	3,630
April	3,770	3,750
May	3,890	3,890
June	3,750	3,750
July	3,370	3,370
August	3,440	3,440
September	3,340	3,330
October	4,000	4,010
November	3,770	3,780
December	3,900	3,920
January–December	43,600	43,600
2020:		
January	4,560	4,510
February	4,270	4,280
March	4,480	4,520
April	3,990	4,020
May	4,410	4,430
January–May	21,700	21,800

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes data from Freeport-McMoRan Inc., 2019–2020. Adjusted by USGS to reflect estimated monthly data.

³As reported by producers.

⁴Shipments include sales to domestic customers, sales for export, and transfers to other company plants.

TABLE 2
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2020:						
April:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	7,120	--	--	--	7,120
Stainless and heat-resisting	154,000	47,700	--	(3)	W	201,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	W	--
Total	399,000	131,000	--	(3)	W	531,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	63,000	63,000
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	167	W	--	--	--	167
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	200,000	53,200	425	(3)	334,000	587,000
Grand total	599,000	185,000	425	(3)	406,000	1,190,000
Stocks, April 30, 2020	504,000	645,000	2,740	(6)	(6)	2,040,000
May:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	7,120	--	--	--	7,120
Stainless and heat-resisting	154,000	47,700	--	(3)	W	201,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	W	--
Total	399,000	131,000	--	(3)	W	531,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	62,100	62,100
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	90	W	--	--	--	90
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	171,000	53,200	425	(3)	334,000	558,000
Grand total	570,000	185,000	425	(3)	405,000	1,160,000
Stocks, May 31, 2020	508,000	645,000	2,740	(6)	(6)	2,040,000

W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" category. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown. Includes U.S. Geological Survey estimates.

²Includes calcium molybdate.

³Withheld to avoid disclosing company proprietary data; included in "Other, Miscellaneous and unspecified uses: Other" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metalworking machinery.

⁶Withheld to avoid disclosing company proprietary data; included in "Total."

(including roasted concentrate), BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2019			2020		
	January– December	May	January– May	April	May	January– May
Belgium	6,690,000	428,000	2,660,000	779,000	609,000	3,790,000
Brazil	15,900	1,910	13,400	6,170	--	7,590
Cambodia	--	--	--	--	--	1,440
Canada	1,120,000	96,600 [†]	431,000 [†]	18,300	56,400	560,000
Chile	218,000	--	218,000	89,500	142,000	232,000
China	533,000	18,000	218,000	86,600	430,000	769,000
Colombia	339	--	339	--	--	--
Estonia	--	--	--	--	--	305,000
Germany	1,090	547	1,090	285	--	285
India	205,000	2,090	51,500	30,100	448	165,000
Japan	3,920,000	362,000 [†]	1,700,000 [†]	236,000	218,000	1,510,000
Korea, Republic of	3,120,000	244,000	1,060,000	716,000	281,000	2,310,000
Mexico	3,050,000	300,000	1,210,000	31,400	106,000	1,570,000
Netherlands	35,900,000	4,200,000	16,900,000	2,170,000	1,560,000	10,300,000
Sri Lanka	1,630	--	--	--	--	--
Taiwan	23,300	--	23,300	--	--	--
Thailand	1,380,000	80,100	80,100	15,100	57,800	631,000
Turkey	--	--	--	--	623	986
United Kingdom	7,550,000	648,000	3,160,000	577,000	72,400	2,600,000
Vietnam	434,000	31,100	123,000	50,600	76,600	170,000
Total	64,200,000	6,410,000 [†]	27,900,000 [†]	4,800,000	3,610,000	24,900,000

[†]Revised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2019			2020		
	January– December	May	January– May	April	May	January– May
Australia	1,610	--	871	--	--	697
Canada	243,000	7,260	96,300 ^r	4,370	40,400	174,000
China	1,210	--	1,210	--	--	--
Denmark	903	472	903	--	--	474
Mexico	306,000	--	123,000	20,000	--	122,000
United Kingdom	420	--	--	--	--	--
Total	552,000	7,730	223,000 ^r	24,400	40,400	297,000

^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January–December 2019			2020					
	Gross weight	Contained molybdenum	Value ² (thousands)	May			January–May		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates, roasted	6,470,000	4,030,000	\$89,600	436,000	259,000	\$5,100	4,160,000	2,540,000	\$47,900
Ore and concentrates, other	34,400,000	16,400,000	440,000	575,000	260,000	4,560	11,300,000	5,320,000	117,000
Molybdenum chemicals:									
Oxides and hydroxides	4,290,000	NA	89,300	292,000	NA	4,490	1,740,000	NA	29,000
Molybdates of ammonium	1,400,000	789,000	24,200	41,700	23,400	593	381,000	214,000	5,620
Molybdates (all others)	221,000	87,700	3,060	3,000	1,190	40	65,000	25,800	647
Molybdenum orange	234,000	NA	1,350	14,000	NA	121	62,500	NA	514
Ferromolybdenum	10,400,000	6,990,000	196,000	486,000	325,000	6,850	3,820,000	2,570,000	58,600
Molybdenum powders	238,000	221,000	8,520	3,960	3,800	190	153,000	144,000	5,210
Molybdenum unwrought	595,000	593,000	19,300	70,800	70,500	1,920	295,000	294,000	8,720
Molybdenum waste and scrap	1,890,000	1,740,000	59,500	141,000	130,000	4,450	629,000	610,000	18,900
Molybdenum wire	18,400	NA	2,150	1,980	NA	289	6,420	NA	751
Molybdenum other	193,000	NA	18,300	16,100	NA	1,190	68,200	NA	6,110
Total	60,300,000	XX	951,000	2,080,000	XX	29,800	22,700,000	XX	299,000

NA Not available. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.